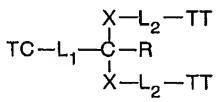
IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Previously Presented) A dendron, having, as a recurring unit of each branch, a structure represented by formula (I):

Formula (I)



wherein TC designates a linkage to a former generation in the direction to a focal point of the dendron; TT's each designate a linkage to a next generation in the direction to a terminal of the dendron; X is -S-, -SO-, or $-SO_2-$; L_1 and L_2's each independently represent a divalent linking group selected from the group consisting of $-CH_2-$, $-CH_2CH_2-$, $-CH_2CH_2CH_2-$, 1,2-phenylene, 1,3-phenylene, 1,4-phenylene, α,2-tolylene, α,3-tolylene, α,4-tolylene, o-xylylene, m-xylylene, p-xylylene, and a divalent group wherein any one of these divalent groups is combined with -O-, -S-, $-P=O(R_1)-$, $-N(R_1)-$, -CO-, -SO-, $-SO_2-$ or $-Si(R_1)(R_2)-$ wherein R_1 and R_2 each independently represents a hydrogen atom or a substituent; R represents a hydrogen atom; and in the recurring units, X's may be the same or different, L_1's may be the same or different, and L_2's may be the same or different, wherein the dendron has a focal point selected from the group consisting of a chain or cyclic saturated hydrocarbon, a chain or cyclic unsaturated hydrocarbon, an aromatic hydrocarbon, a non-aromatic heteroring, an aromatic heteroring, and the focal point may have a substituent selected from the group consisting of a mercapto group, a hydroxyl group, a cyano group, a nitro group, a halogen atom, a hydrazino group, an azo

group, an isocyanato group, an isothiocyanato group, a thiocyanato group, a carboxyl group, a sulfo group, an acyl group, a formyl group, an alkoxycarbonyl group, a carbamoyl group, a sulfamoyl group, an alkoxysulfonyl group, a sulfonyl group, an amino group, an acylamino group, a sulfonylamino group, a sulfenyl group, a sulfinyl group, an alkoxy group, an alkyl group, an alkenyl group, an alkynyl group, an aryl group, a silyl group, a silyloxy group, and a heterocyclic group and the dendron has a generation number of from 2 to 20.

2. (Canceled)

3. (Original) The dendron according to claim 1, wherein the divalent group represented by X in formula (I) is -S-.

4. (Canceled)

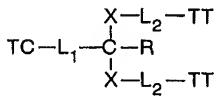
5. (Canceled)

6. (Canceled)

7. (Original) The dendron according to claim 1, whose terminal surface has a functional group selected from a mercapto group, a hydroxyl group, a halogen atom, a hydrazino group, a cyano group, an isocyanato group, an isothiocyanato group, a thiocyanato group, a carboxyl group, a sulfo group, an acyl group, a formyl group, an amino group, an alkenyl group, or an alkynyl group, each of which may be in a protected form.

8. (Currently Amended) A dendrimer, having, as a recurring unit of each branch, a structure represented by formula (I):

Formula (I)



wherein TC designates a linkage to a former generation in the direction to a core of the dendrimer; TT's each designate a linkage to a next generation in the direction to a terminal of the dendrimer; X is -S-, -SO-, or $-SO_2-$ ~~represents a divalent group comprised of at least one heteroatom~~; L_1 and L_2's each independently represent a divalent linking group selected from the group consisting of $-CH_2-$, $-CH_2CH_2-$, $-CH_2CH_2CH_2-$, 1,2-phenylene, 1,3-phenylene, 1,4-phenylene, α,2-tolylene, α,3-tolylene, α,4-tolylene, o-xylylene, m-xylylene, p-xylylene, and a divalent group wherein any one of these divalent groups is combined with -O-, -S-, $-P=O(R_1)-$, $-N(R_1)-$, -CO-, -SO-, $-SO_2-$ or $-Si(R_1)(R_2)-$ wherein R_1 and R_2 each independently represents a hydrogen atom or a substituent; R represents a hydrogen atom ~~or a substituent~~; and in the recurring units, X's may be the same or different, ~~R's may be the same or different,~~ L_1's may be the same or different, and L_2's may be the same or different, wherein the dendrimer has a core selected from the group consisting of a chain or cyclic saturated hydrocarbon, a chain or cyclic unsaturated hydrocarbon, an aromatic hydrocarbon, a non-aromatic heteroring, an aromatic heteroring, and the focal point may have a substituent selected from the group consisting of a mercapto group, a hydroxyl group, a cyano group, a nitro group, a halogen atom, a hydrazino group, an azo group, an isocyanato group, an isothiocyanato group, a thiocyanato group, a carboxyl group, a sulfo group, an acyl group, a formyl group, an

alkoxycarbonyl group, a carbamoyl group, a sulfamoyl group, an alkoxysulfonyl group, a sulfonyl group, an amino group, an acylamino group, a sulfonylamino group, a sulfenyl group, a sulfinyl group, an alkoxy group, an alkyl group, an alkenyl group, an alkynyl group, an aryl group, a silyl group, a silyloxy group, and a heterocyclic group and the dendrimer has a generation number of from 2 to 20.

9. (Canceled)

10. (Original) The dendrimer according to claim 8, wherein the divalent group represented by X in formula (I) is -S-.

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Original) The dendrimer according to claim 8, whose terminal surface has a functional group selected from a mercapto group, a hydroxyl group, a halogen atom, a hydrazino group, a cyano group, an isocyanato group, an isothiocyanato group, a thiocyanato group, a carboxyl group, a sulfo group, an acyl group, a formyl group, an amino group, an alkenyl group, or an alkynyl group, each of which may be in a protected form.

15. (Currently Amended) A method of producing **[[a]]** the dendron of claim 1, which is a convergent method in which n branches are formed from a gth generation, so as to form a (g+1)th generation, in which n is an integer of 2 to 5 and g is an integer of 1 or more, which comprises the step of:

carrying out a reaction, to form the branches,

the reaction satisfying a relationship of:

$k_1 < k_m$

wherein m is an integer of 2 or more but less than n; k_1 represents a rate of growth reaction from the gth generation to the (g+1)th generation, in which only one branch has grown from the gth generation; and k_m represents a rate of reaction from a structure in which (m-1) branches out of the n branches have grown to a structure in which m branches have grown.

16. (Original) The method according to claim 15, wherein the step of forming branches is carried out repeatedly.

17. (Original) The method according to claim 15, wherein the reaction rate k_m further satisfy a relationship of:

$k_{m-1} < k_m < k_n$

wherein k_{m-1} represents a rate of reaction from a structure in which (m-2) branches out of the n branches have grown to a structure in which (m-1) branches have grown, and k_n represents a rate of reaction from a structure in which (n-1) branches out of the n branches have grown to a structure in which n branches have grown.

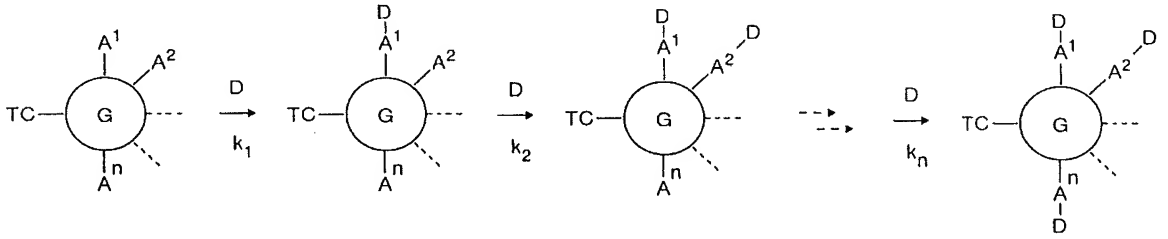
18. (Original) The method according to claim 17, wherein the step of forming branches is carried out repeatedly.

19. (Original) The method according to claim 15, which satisfies the following condition:

$k_1 < k_2 < \ldots \ldots < k_n$

in a reaction for forming a branch structure of said dendron or dendrimer, as represented by formula (II):

Formula (II)



wherein, in formula (II), TC designates a linkage to a former generation in the direction to a focal point of the dendron, or TC designates a linkage to a former generation in the direction of a core of the dendrimer; G represents a group containing at least one carbon atom; A^1, A^2, ..., and A^n mean that G can form n bonds; n represents an integer of 2 to 5; k_1, k_2, ..., and k_n represent rate constants of respective reactions; and D represents a monovalent group for forming a moiety at a surface terminal side of the dendron or dendrimer.

20. (Currently Amended) A method of producing **[[a]]** the dendron of claim 3 ~~or a dendrimer~~, comprising:

subjecting a thiol to a reaction with a carbonyl compound or an equivalent thereof, to form a thioacetal, thereby forming a branch structure of said dendron or said dendrimer.

21. (Canceled)

22. (Canceled)

23. (Currently Amended) The method according to claim **[[**21**]]** 25, wherein the thiol compound having in the molecule thereof a thioacetal structure has at least one thiol group and at least one thioacetal structure represented by R^1-$C(SR^2)_2$-R^3, in which R^1 and R^3 each independently represent a hydrogen atom, an alkyl group, an aryl group, an alkenyl group, an alkynyl group, or a heterocyclic group, provided that R^1 and R^3 are not hydrogen atoms simultaneously; and R^2 is an alkyl group, an aryl group, an alkenyl group, an alkynyl group, or a heterocyclic group.

24. (Currently Amended) The method according to claim **[[**21**]]** 25, wherein the carbonyl compound is represented by R^4-CO-R^5, in which R^4 and R^5 each independently represent a hydrogen atom, an alkyl group, an aryl group, an alkenyl group, an alkynyl group, or a heterocyclic group, provided that R^4 and R^5 are not hydrogen atoms simultaneously; and wherein the equivalent of the carbonyl compound is represented by R^4-CX_2-R^5, in which R^4 and R^5 have the same meanings as defined in the above; and X_2 is an alkoxy group, an aryloxy group, a heteroaryloxy group, a halogen atom, an imino group, a hydroxyimino group, an

alkoxyimino group, a sulfonylimino group, an acylimino group, or an aminoimino group.

25. (Currently Amended) A method of producing **[[**a**]]** the dendrimer of claim 10, comprising the step of:

producing a thioacetal structure by **[[**the**]]** a method of producing a thioacetal compound ~~according to claim 21~~ comprising subjecting a thiol compound having in the molecule thereof a thioacetal structure, to a reaction with a carbonyl compound or an equivalent thereof, in the presence of a catalyst, in a reaction solvent selected from ethers, esters, amides, sulfoxides, alcohols, nitriles, and sulfones, thereby to form a thioacetal structure.

26. (Original) The method according to claim 25, wherein the solvent is a cyclic ether.

27. (Currently Amended) A method of producing **[[**a**]]** the dendron of claim 3, comprising the step of:

producing a thioacetal structure by **[[**the**]]** a method of producing a thioacetal compound ~~according to claim 21~~ comprising subjecting a thiol compound having in the molecule thereof a thioacetal structure, to a reaction with a carbonyl compound or an equivalent thereof, in the presence of a catalyst, in a reaction solvent selected from ethers, esters, amides, sulfoxides, alcohols, nitriles, and sulfones, thereby to form a thioacetal structure.

28. (Original) The method according to claim 27, wherein the solvent is a cyclic ether.

29. (New) A method of producing the dendrimer of claim 10, comprising:

subjecting a thiol to a reaction with a carbonyl compound or an equivalent thereof, to form a thioacetal, thereby forming a branch structure of said dendron or said dendrimer.

30. (New) The method according to claim 27, wherein the thiol compound having in the molecule thereof a thioacetal structure has at least one thiol group and at least one thioacetal structure represented by R^1-$C(SR^2)_2$-R^3, in which R^1 and R^3 each independently represent a hydrogen atom, an alkyl group, an aryl group, an alkenyl group, an alkynyl group, or a heterocyclic group, provided that R^1 and R^3 are not hydrogen atoms simultaneously; and R^2 is an alkyl group, an aryl group, an alkenyl group, an alkynyl group, or a heterocyclic group.

31. (New) The method according to claim 27, wherein the carbonyl compound is represented by R^4-CO-R^5, in which R^4 and R^5 each independently represent a hydrogen atom, an alkyl group, an aryl group, an alkenyl group, an alkynyl group, or a heterocyclic group, provided that R^4 and R^5 are not hydrogen atoms simultaneously; and wherein the equivalent of the carbonyl compound is represented by R^4-CX_2-R^5, in which R^4 and R^5 have the same meanings as defined in the above; and X_2 is an alkoxy group, an aryloxy group, a heteroaryloxy group, a halogen atom, an imino group, a hydroxyimino group, an alkoxyimino group, a sulfonylimino group, an acylimino group, or an aminoimino group.